

# SPREAD SPECTRUM IN-BAND UTILITY COMMUNICATION CHANNEL

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## Abstract of the Disclosure

Utility data modulation is superimposed on a payload data modulator optical signal by exploiting spread spectrum techniques by virtue of one embodiment of the present invention. Utility data transmission rates of e.g., 200 Kbps, can be achieved without impairment to payload data transmission. The utility data modulated signal spectrum overlaps or is entirely within the payload data modulation spectrum, therefore, overcoming problems with optical amplifier gain control and pink noise.